WHAT IS CLAIMED IS:

1. Apparatus for decreasing the low frequency cut-off of a combined Vivaldi notch/meander line loaded antenna, comprising:

an array of concatenated Vivaldi notch meander line loaded antenna elements, each of said elements having at least one plate coupled to an adjacent plate by a meander line, adjacent elements having adjacent plates electrically coupled together, whereby at low frequencies the adjacent antenna elements function as one larger element having a low cut-off frequency lower than that associated with the adjacent elements separately.

2. The apparatus of Claim 1, wherein said adjacent plates have a single plate substituted therefor.

3. The apparatus of Claim 1, wherein each of said plates includes therein a Vivaldi notch having a throat and a slot to the rear of said throat.

4. The apparatus of Claim 3, wherein each of said plates has a cavity interposed between the throat and the slot therein.

5. The apparatus of Claim 1, wherein two of said elements are concatenated, thus to decrease said low frequency cut-off by the increased size of the array over a single one of said elements.

6. The apparatus of Claim 1, wherein four of said elements are concatenated.

7. The apparatus of Claim 6, wherein the low frequency cut-off of said array is below 20 MHz.

8. The apparatus of Claim 1, wherein each of said elements have an ultra wide bandwidth.

9. The apparatus of Claim 8, wherein said array exhibits a single lobe end-fire pattern.

10. The apparatus of Claim 9, wherein the high frequency cut-off of said array is in excess of 1.5 GHz.

11. The apparatus of Claim 9, wherein the high frequency cut-off is below that frequency at which grating lobes are unacceptable.

12. The apparatus of Claim 9, wherein the high frequency cut-off is below that frequency at which grating lobes exist.

13. A method for reducing the low frequency cut-off of a combined Vivaldi notch/meander line loaded antenna comprising the step of:

concatenating a number of adjacent Vivaldi notch/meander line loaded antenna elements such that at low frequencies the elements act as one element.

14. The method of Claim 13, wherein said concatenated elements form an array.

15. The method of Claim 13, wherein the elements have plates and wherein the concatenation step includes providing that adjacent elements share a plate.

16. The method of Claim 13, wherein the elements have plates and wherein the concatenation step includes the step of electrically connecting plates of adjacent elements.

17. The method of Claim 13, wherein the elements have plates and wherein selected ones of said plates have therein a Vivaldi notch having a throat and a slot communicating with the notch and running aft of the notch.

18. The method of Claim 17 and further including a cavity interposed between the notch and the slot.

19. The method of Claim 17, wherein each of the plates have therein the Vivaldi notch and the slot.

20. The method of Claim 13, wherein the low frequency cut-off is below 20 MHz.

21. The method of Claim 13 and further including the steps of providing the concatenated elements with a selectable polarity characteristic.

22. The method of Claim 22, wherein the polarity characteristic is selected from the group consisting of horizontal, vertical, left hand circularly polarized and right hand circularly polarized polarities.

23. The method of Claim 14, wherein the array is steerable.

24. The method of Claim 13, wherein at the higher frequencies each of the concatenated elements operates independently.

25. The method of Claim 22, wherein at the higher frequencies there is significant isolation between horizontal and vertical polarization.